

BOSCH DATA STRATEGY

WORKSHOP
INDUSTRIAL DATA MANAGEMENT & DATA STRATEGY
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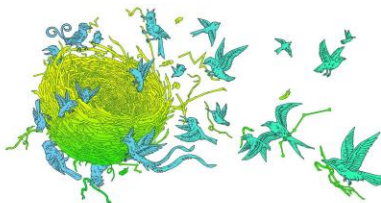
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Bosch Data Strategy

What is a data strategy?

A data strategy ensures that data is managed and used like an asset

Harvard Business Review



STRATEGY

What's Your Data Strategy?

by Leandro DalleMule and Thomas H. Davenport

FROM THE MAY-JUNE 2017 ISSUE

More than ever, the ability to manage torrents of data is critical to a company's success. But even with the emergence of data-management functions and chief data officers (CDOs), most companies remain badly behind the curve. Cross-industry studies show that on average, less than half of an organization's structured data is actively used in making decisions—and less than 1% of its unstructured data is analyzed or used at all. More than 70% of employees have access to data they should not, and 80% of analysts' time is spent simply discovering and preparing data. Data breaches are common, rogue data sets propagate in silos, and companies' data technology often isn't up to the demands put on it.

“Companies that have not yet built a **data strategy** and a strong data-management function need to catch up very fast or start planning for their exit.”

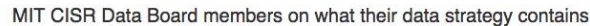
Future-proof data strategies should address defense and offense

	Defense	Offense
Goals	Ensure data security, privacy, integrity, quality, regulatory compliance, and governance	Improve competitive position and profitability
Core activities	Optimize data extraction, standardization, storage, and access	Optimize data analytics, modeling, visualization, transformation, and enrichment
Data management orientation	Control	Flexibility
Enabling architecture	SSOT (Single source of truth)	MVOTs (Multiple versions of the truth)

<https://hbr.org/2017/05/whats-your-data-strategy>

What is a data strategy?

a central, integrated concept that articulates how data will enable and inspire business strategy.



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A company's data strategy needs to address **offense** as well as **defense**. This implies that it answers questions around

- The strategy defines the capabilities and needs to evolve reflecting the organization's **current state of data maturity**.



Bosch Data Strategy

Vision/Mission – Balanced use of data for business success

Turn data into a key asset for Bosch to become the leading AI-driven IoT company

THINK & ACT DATA-DRIVEN

Innovation

We enable **new ways of utilizing our data** for new business models, partnerships, and future technologies like artificial intelligence.

Value

We establish and maximise the **data value contribution for data-driven and data business processes**, e.g. decision making, analytics, automation, enhance customer services,...



Compliance

We establish **standards for data usage and provisioning** to create transparency, assure legal compliance and minimize legal and operative risks.

Trust

We establish **data rules and policies** that provide the best **data quality, security and control** for our customers to establish RB as the most trustful IoT partner.

Data Offense

Data Defense

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To turn data into a key asset for Bosch the Data Strategy addresses four dimensions

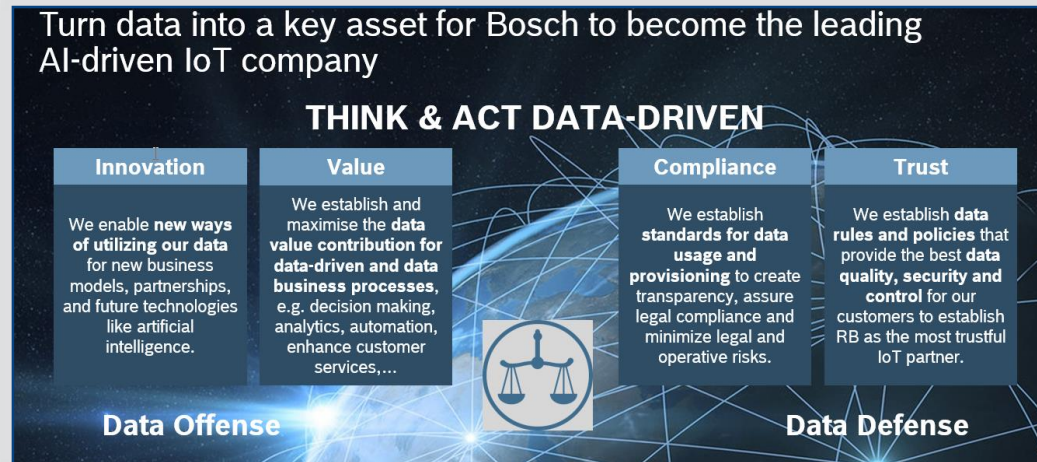


Organisation (Data Governance & Expert Network)

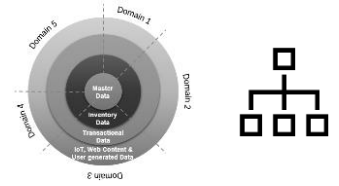
Data-Driven Business



Data-Driven Operations



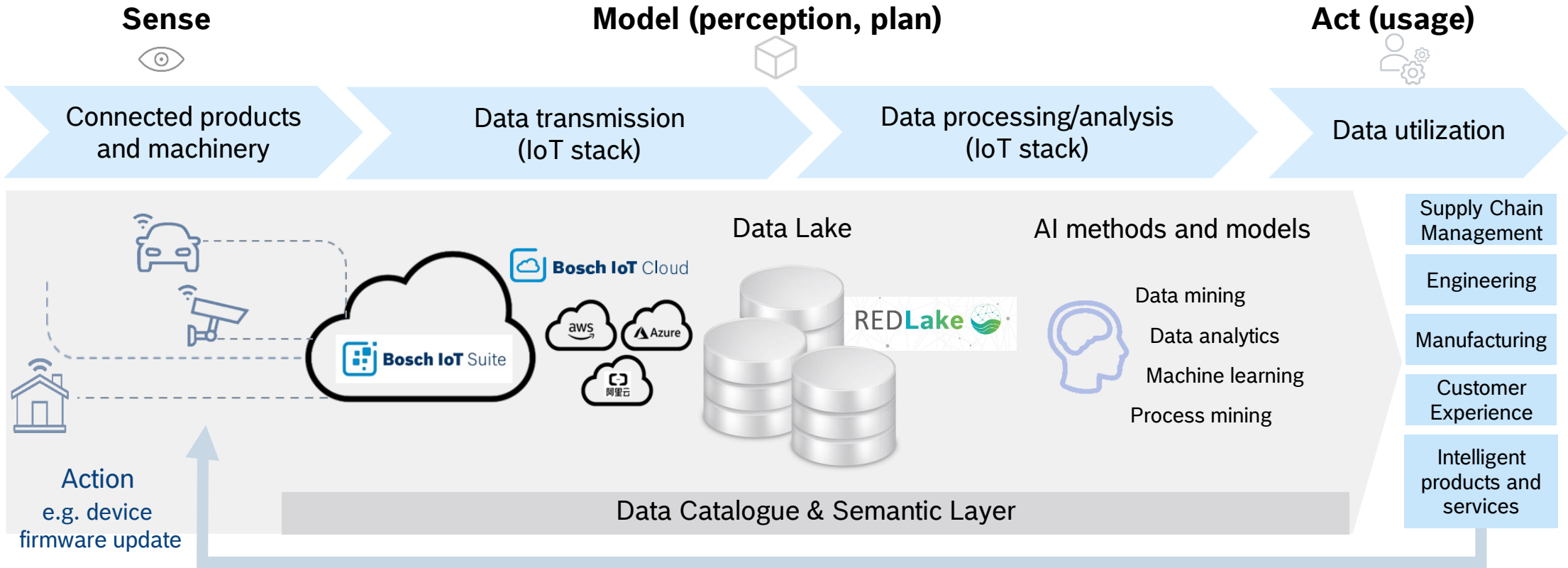
Holistic view on all data types



Tools & Methods (e.g. Data Catalogue, Data Platform, Semantics)

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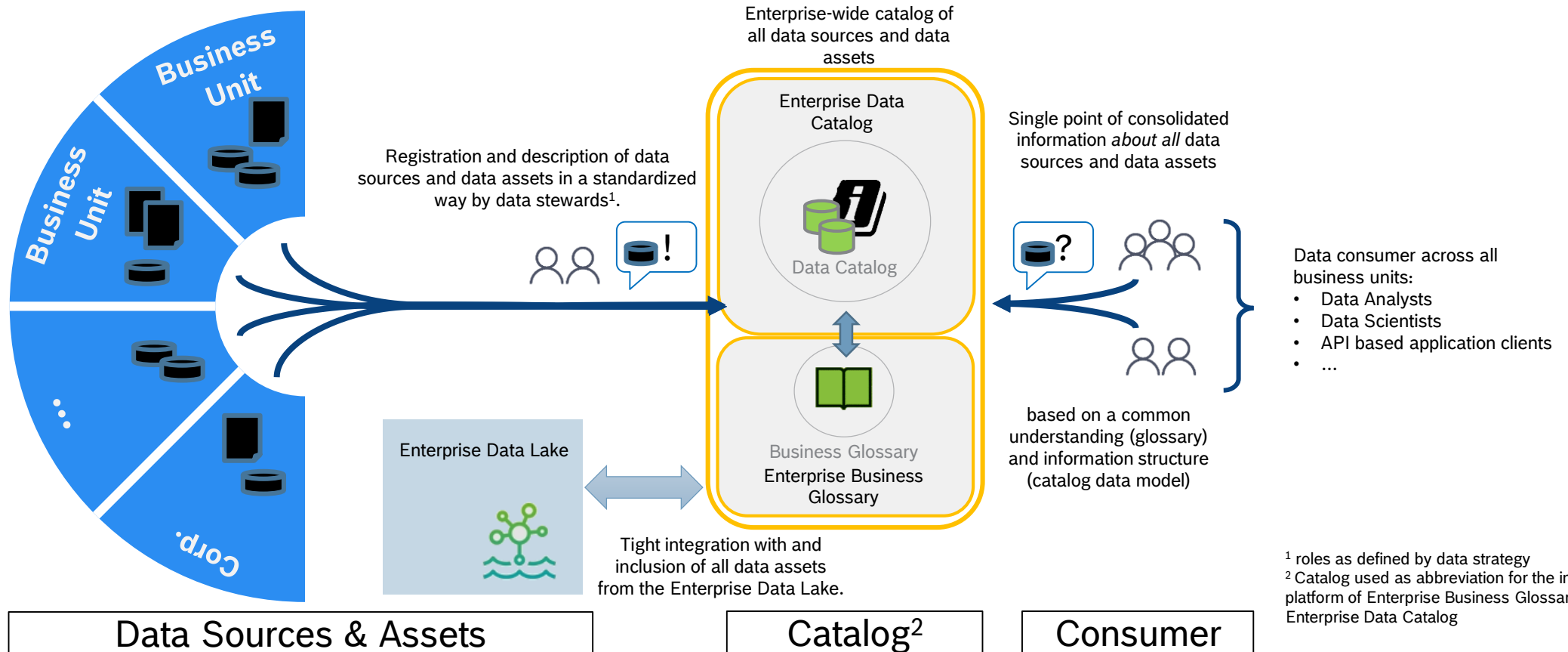
Connectivity, data & AI/ML are key technologies



AI uses data from connected things to create models of reality. Data management is key for this!

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Example I: Key element “Enterprise Data Catalog as single point of information”

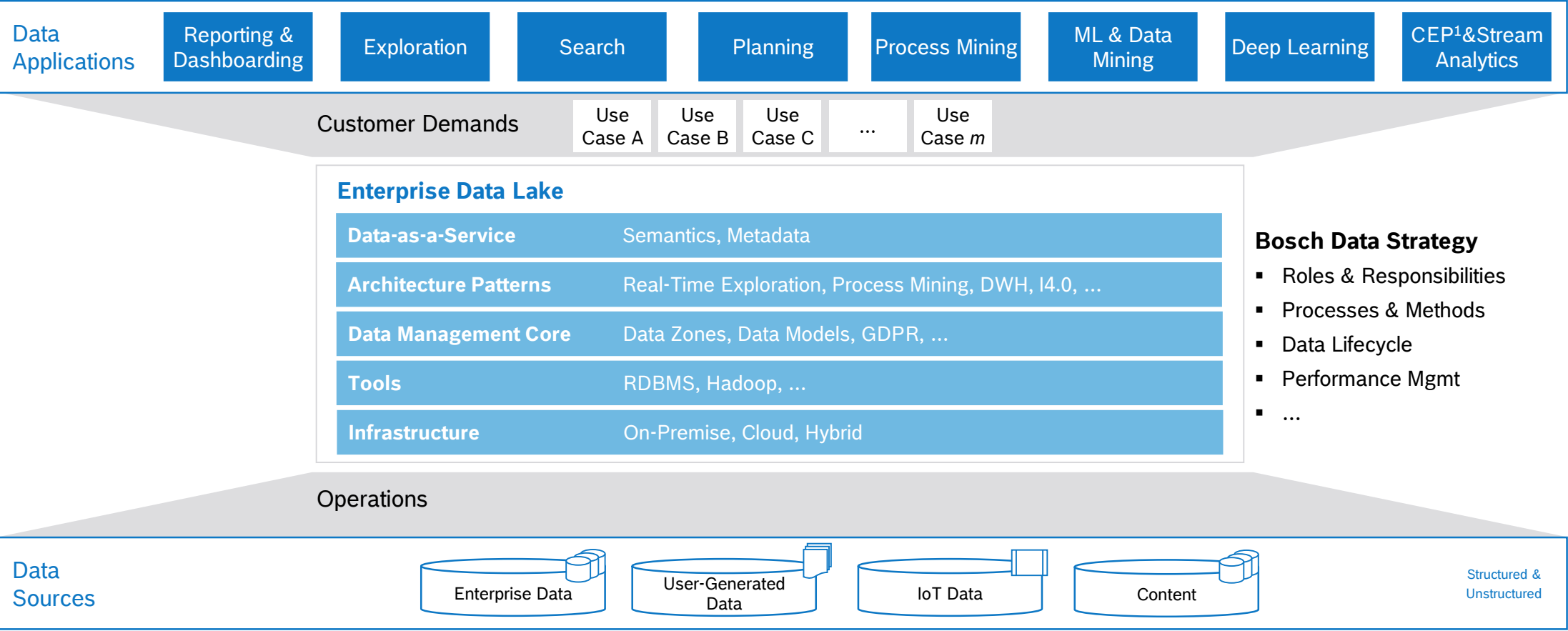


¹ roles as defined by data strategy

² Catalog used as abbreviation for the integrated platform of Enterprise Business Glossary and Enterprise Data Catalog

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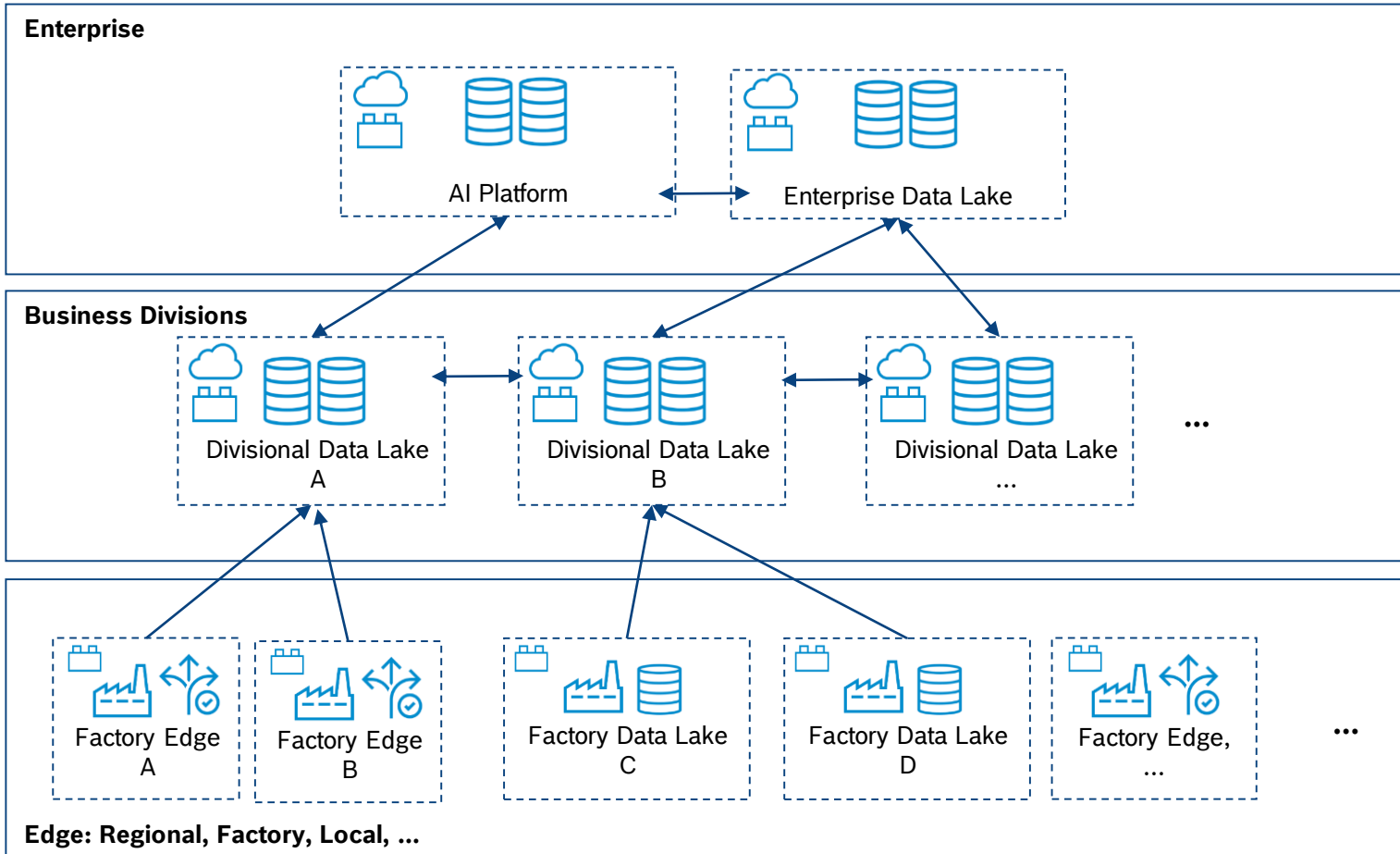
Example II: Key element “Corporate Data Platform as foundation for Analytics & AI”



1 Complex Event Processing

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Example III: Key element “Data Lake and AI Platform Landscape”



Analytics Governance

How to ensure security, lineage and life cycle management of data?

- Across different data lakes
- Across different analytical tools

How to balance trust and flexibility of analytics?

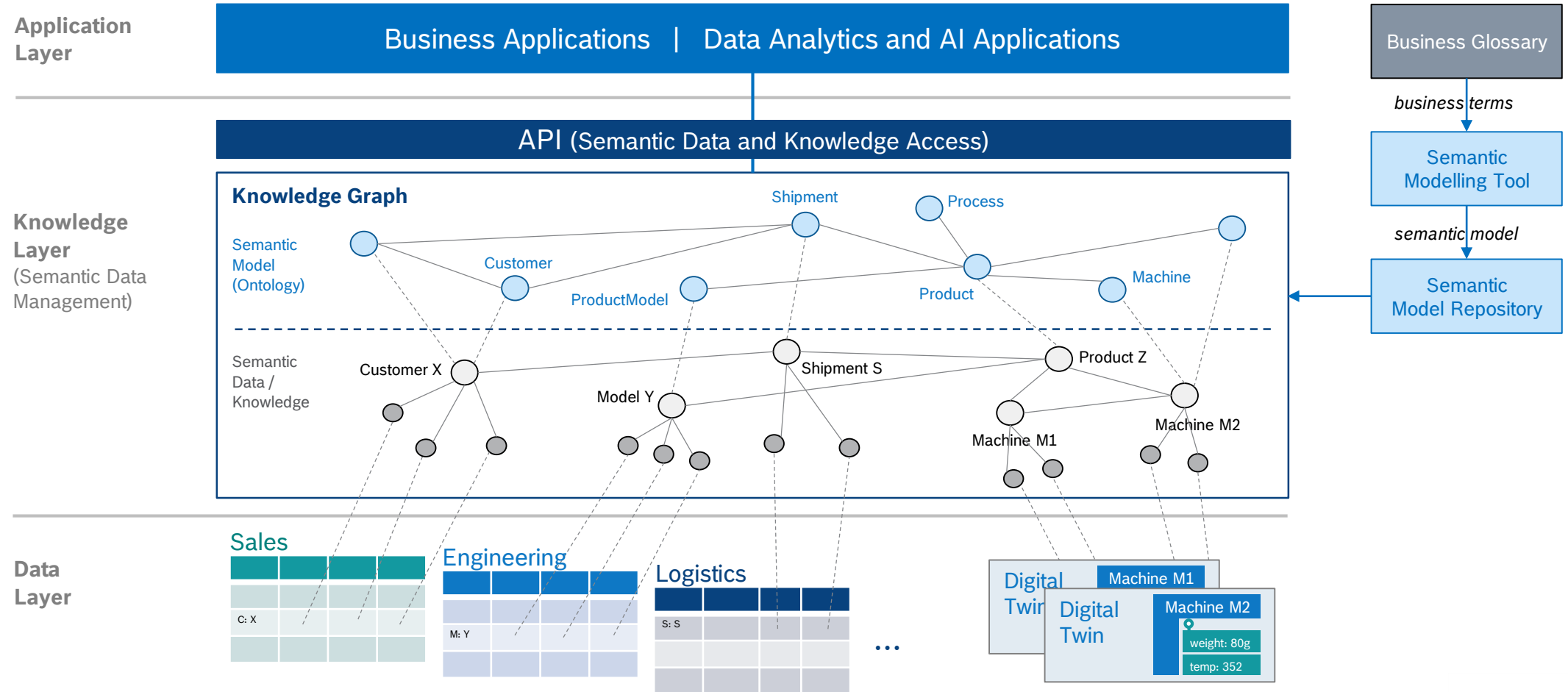
- Managed ETL vs self-service data wrangling
- User-driven data discovery vs governed analytics projects

How to integrate with the existing data warehouse landscape?

- Data management across DHWs and data lakes

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Example IV: Key element “Semantic Data Management”



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Example VI: Key Element “Roles and Responsibilities”

Chief Data Officer

Strategic Role on C-level: Provides **sponsorship, strategic direction and funding** for data



Data Governance Owner

Role on top-management level, e.g. plant manager, **accountable** for establishing and implementing a **data domain** and rules.

Data Asset Owner

Role on top-management level, e.g. plant manager, **legal and commercial accountability and responsibility** for **data assets**.



Data Steward

Role on management level, e.g. business domain expert: **responsible for definition of data domain, managing data as an asset, and coordination of stewards**, as assigned by data owner. **accountable for implementation** of data domain and rules for **assigned data assets**.



Data Custodian

Role on associate level, e.g. data engineer, **responsible for implementation** of data domain and rules for **assigned data assets**.



Data Consumer

Role on associate level, e.g. data engineer, **utilizing the data** in a business context, obliged to **comply to data policies** applicable to the utilized data sets.

THANK YOU!

For questions or interest in collaboration, feel free to contact us!